PATIENT & CAREGIVER EDUCATION

Functional Magnetic Resonance Imaging (fMRI)

This information will help you prepare for your functional magnetic resonance imaging (fMRI) at Memorial Sloan Kettering (MSK).

An fMRI is a test that uses strong magnetic fields to create pictures of the inside of your brain. It’s used to look at brain activity by measuring the amount of blood flowing to different parts of your brain. During your fMRI, you will be asked to do simple tasks that will help your doctor find the area of your brain that controls speech and movement. This information will help your doctor plan your care.

If you have any of the devices listed below, call 646-227-2323. It may not be safe for you to have an MRI.

- Pacemaker
- Automatic implantable cardioverter-defibrillator (AICD)
- Breast tissue expander
- Aneurysm clip

If an MRI is not safe for you, your doctor will order a different test. If you have any other questions about your MRI, call your doctor’s office.

Before Your fMRI

Preparing for Your fMRI

- If you have a medical implant or device, ask the doctor who put it in for the
exact name and manufacturer. If you don’t have this information before your fMRI, you may not be able to have the fMRI that day.

- During your fMRI, you will lie on your back with your arms at your side. If you think you will be uncomfortable lying still or if you’re afraid of being in a narrow or small space, talk with your doctor or nurse ahead of time.

- If you wear contact lenses, please wear them the day of the fMRI. This will make it easier to complete the tasks presented to you while you are in the fMRI.

- If you wear a medication patch on your skin, you may need to remove it before your fMRI. This is because metal in the patch may heat up during your fMRI and cause burns. Make sure you have an extra medication patch with you to apply after your fMRI.

The Day of Your fMRI

Things to remember

- Check the printed reminder you received from your doctor’s office for the time and location of your fMRI.

- If you have a medical device (such as a stent or port), bring the information card that your nurse gave you to your fMRI.

- You may take your medication(s) as usual before your fMRI.

- If you wear a medication patch on your skin, bring an extra one with you.

- If your doctor prescribed medication to help you relax during your fMRI, bring it with you. Don’t take it without speaking to the technician performing the fMRI first.

What to expect

You will change into a hospital gown before going into the scanning area. For safety reasons, you will place your clothing, credit cards, and any objects (such as your phone, jewelry, coins, and glasses) in a locker. This is because objects with even a small amount of metal can fly into the magnet, and the magnet can damage mobile phones and credit cards.
Your doctor will talk with you about the fMRI tasks that you will be doing before you go into the MRI scanning room. You may be asked to think of words that fit a category or answer questions about your speech or strength. At this time you should tell your doctor about any speech difficulties you may have.
Your technologist will bring you to the scanning room and help you onto the MRI table. The MRI scanner is a large, donut-shaped magnet. It makes a loud tapping noise during the scan.

Once you’re comfortable on the table, your technologist will slide the table into the scanner and begin your MRI. You will be able to speak with your technologist during the entire scan.

While you’re lying in the MRI scanner, your doctor will ask you to perform a task for about 20 seconds and then rest. This will be repeated 5 to 6 times.

It’s important to lie still during the scan.

Your fMRI will take 30 to 60 minutes.

**After Your Procedure**

- When your fMRI is complete, your technologist will slide the scanning table out of the machine and help you off the table. After you get your belongings, you may leave the fMRI suite.
- There are no restrictions after your fMRI and no special care is needed.
- Your doctor will get a report with the results of your fMRI. They will use this and other test results to plan your care.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit [www.mskcc.org/pe](http://www.mskcc.org/pe) to search our virtual library.

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